



TO: TEXAS RANGERS  
ATTN: RANGER JOEY GORDON

FROM: NICO PYROTECHNIK  
FRED PICKLER

SUBJECT: IDENTIFICATION OF NICO PYROTECHNIK 40mm x 46 S&F

DATE: 27 AUGUST 1999

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Dear Ranger Gordon:

Regarding our meeting yesterday, I have spoken with our technician in Germany and he has provided me with additional information you requested.

An updated drawing follows, with additional identification and chemical information.

1. The two aluminum parts of the body, which we examined yesterday, are secured with "Loctite 270, which is Green in color. This material is utilized to bond the blast chamber housing to the base piece. Both pieces of material are in fact aluminum, and not steel as previously mentioned.
2. The "plastic casing" is the outer housing or windscreen, and in the two rounds we examined yesterday, are black in color. The plastic is described as a Delrin plastic, standard grade as manufactured by Du Pont.
3. The lower part of the delay column, identified as "delay charge" consists of a mixture of 80% silicum powder (Si) and 20% red lead (Pb3 O4). Mr. Haeselich said the red lead is an oxidizer, and the two chemicals (Silicum and red lead) are blended and pressed into a delay column within the base of the projectile. The spelling of silicum is correct according to him.
4. The report charge is according to Mr. Haeselich, a mixture of Potassium perchlorate and aluminum powder. This material is placed in the effect chamber of the upper portion of the inner aluminum tube.
5. The tip of the projectile, when it left the factory had a sealing cover which was partially, internally machined, and the cut would not have passed through the nose of the outer portion of the plastic material. This area is identified as the shear off point in the drawing.
6. Before assembly into the actual projectile, the black powder in the lower portion of the chamber holding the report charge was placed in position. The delay charge was then pressed into the same housing. The report charge was then placed in the top opening, and a sealing disc, which contained a thin aluminum foil on both sides, was placed over the report chamber, in the nose section of the round. This disc was then sealed with a crimp at the rim of the chamber.